

**THE IRON TRADE.**—This trade is still looking up. The nominal advance in price, however, has not exceeded 12. a ton. It is admitted by the *Birmingham Journal* also, that the trade generally are persuaded that the advance now made "must prove injurious to the manufacturing interest, and render very doubtful the success of the competition into which it has been thrown with our foreign rivals." The orders that are still being executed by the ironmasters, however, are most of them, in fact, old orders at the old prices, and the recent stir and nominal advance has induced the coalmasters to propose a further advance in the price charged to the masters for their commodity. The trade at Newcastle, according to the *Gateshead Observer*, is in a most satisfactory condition. There the masters meet occasionally to talk over the state of affairs, but, as remarked in the *Observer*, they are not combined to force prices up unnaturally.

**GOVERNMENT AID TO DRAWING SCHOOLS.**—The Board of Trade have resolved that the department of practical art shall have power to assist schools with examples for teaching drawing on condition that the applicants are willing to pay half the prime cost of them; the secretary at Marlborough-house to furnish a list of the examples of drawing copies, models, casts, and materials to be so provided.

**INSURANCE OF WORKMEN'S TOOLS.**—A correspondent, who appears to be himself a workman, in allusion to an appeal to the public on behalf of the workmen who suffered by the late fire at Mr. Grimdell's, expresses his surprise that they had not joined their fellows in the trade who mutually insure their tools, besides reaping other benefits, on paying a small entrance fee of from 5s. to 8s. and a weekly payment of twopence or threepence, a continuance of which payment for twelve months constitutes a member entitled to the benefits thus mutually conferred. Our correspondent very properly recommends self-reliance of this sort to workmen. They require, however, the establishment of some general association in which all could confide.

**LAUNCHING LIFE-BOATS.**—An improvement has been carried out at Dundee, on the suggestion of Mr. Ower, the harbour engineer, which ought to be generally known and imitated wherever life-boats are stationed out of water. In this case the boat stands ready on a short railway, or patent slip, on a steep gradient, and fastened, so that on an emergency the boat can be instantly launched, with railway speed, into the water, and thus the first few minutes, which are so all important in most cases where life-boats are called for, can be made effectual use of in the saving of life. The form of life-boats is another point still requiring improvement, as the recent upsetting of the Duke of Northumberland's prize boat sufficiently manifests. A life-boat should be as difficult to upset as a life-raft, and if sails and masts be the cause of such an ill-placed and ill-timed catastrophe, they must be made lower, and other ad compensatory means of rapid sailing be devised.

**BUILDING A CAIRN.**—The ceremony of building the "Cairn Clach-Chuimhneachan Balmoral" is said to have taken place on Monday week, on Craig Gowan. Her Majesty laid the first stone, and his Royal Highness Prince Albert, with the rest of the royal family, assisted, each placing a stone upon the Cairn, as did also the different members of the royal household, and the inhabitants living on the estate, who assembled for that purpose.

**CARDIFF DRAINAGE.**—At a recent meeting of ratepayers, numerously attended, it was resolved by a very large majority to urge the Local Board of Health not to proceed with Mr. Rammel's pipe-drainage until the opinion of Mr. Stephenson, or some other eminent engineer, should be obtained; as it had been proved that pipe-drainage in several cases had failed; as many eminent engineers were opposed to it; and for other reasons set forth in the resolution. Cardiff is thus as far off having drainage of any sort as ever.

**KENSINGTON GARDENS.**—The well-remembered Coalbrookdale gates from the Great Exhibition are being erected at the end of the broad walk in Kensington gardens.

**LIVERPOOL FREE PUBLIC LIBRARY AND MUSEUM.**—On Tuesday last this valuable institution was opened by a formal public meeting, at which the mayor and several members of Parliament, and many other influential men attended. The mayor, aldermen, and councillors proceeded to the library in procession, and the meeting was addressed in a lucid speech by Mr. Picton, who appears to have taken an active part in the foundation of the library and museum.

**FALL OF TWO HOUSES.**—Two new houses in Lansdowne-street, Brighton, sank to the ground in a mass, on Monday week. One was nearly roofed in, the other was one half wall up; and the mortar was consequently throughout more or less damp. During the whole day, the rain had "poured."

**MOTIVE POWER.**—Mr. A. de Montrivel has patented a method of obtaining motive power from atmospheric air or other gas compressed in a cylinder or suitable vessel, by the application, alternately, of heat and cold, whereby the air or gas is alternately expanded and condensed, and a reciprocating motion thus produced on a piston moving inside the cylinder. To make the piston more effectually air-tight, it is packed, so to speak, with fluids such as water, or semi-fluid matters, such as grease, &c.

**ADVERTISING ARCHITECTS.**—I enclose you an advertisement taken from a Nottingham journal, which will show that we are progressing in these parts. Drapers and grocers' puffing advertisements are very common, but this is the first architectural puff I have seen. The address given is not far from the *Lunatic Asylum*:—"—, architect, building surveyor, measurer, and licensed valuer of all descriptions of artificers' works connected with building; formerly a resident in Nottingham for many years; late clerk of works to the — and other extensive works in various parts of England and North Wales, for the last twelve years. — respectfully announces that he has commenced in the above profession in all its various branches, earnestly soliciting the patronage of a discerning public, trusting, by unremitting attention, impartial conduct, and reasonable charges; to meet with that support his long experience (upwards of forty years) may merit: he also furnishes every description of architectural designs, plans, elevations, sections, specifications, and estimates, at the lowest remunerative charge, viz. 2l. per cent. on the amount of estimate, or final outlay. — respectfully invites persons going to build to an inspection of specimen drawings."—A. B.

**IMPROVEMENTS IN VEHICLES FOR RAILWAYS AND COMMON ROADS.**—Some improvements in the construction of the above have been patented by Mr. W. Pidding, among the most noticeable of which are—"1. A mode of constructing carriage-wheels with flexible spokes, composed of whalebone, spring steel, &c. and with divided tyres. The several portions of tyre are covered with a flexible material. 2. The application of catches to the spokes of carriage-wheels constructed as above, for the purpose of combining or centralizing the power of any number of such spokes. 3. The use of friction-roller bearings for axles, by which the necessity for the employment of lubricating materials is dispensed with. The friction rollers are supported in a circle of radially-formed pieces of metal and India-rubber placed alternately, and encircled by a band of India-rubber, which maintains a constant tendency to contract and bind the circle of radial pieces close together and upon the friction rollers. 4. A mode of mounting the elastic-spoked and divided tyre-wheels on axles of unequal length, by which they may be brought close together, and one pair made to overlap or project beyond the other pair. 5. Two modes for employing portable rails to be laid down by a carriage as it advances." If Mr. Pidding has succeeded in this last invention, he has accomplished what many a clever engineer has long desired practically to accomplish. He might thus resolve the problem of common road locomotives. Rail-rims with an elliptical movement in advance of the wheels, the centre of the elliptical

orbit coinciding with the axis of the wheel, would appear to be a hopeful *modus operandi* for such an intention.

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## TO CORRESPONDENTS.

"J. M. O." "J. E." "W. K." (shall hear from us). "C. C. N." (thanks). "W. B." "A. M." (we are unable to recommend). "A. B." (we should be pleased by adding without personal knowledge). "J. W. H." (shall have attention). "A. and C." "R. F." (against our rules). "A. G." "R. H." (shall be happy to receive them). "W. J. T." "R. T. S." "A. Builder." "Deba." "S. C." "An old Practitioner." "An Inhabitant." "C. W." (the roof of Westminster Hall is of oak). "C. J." "A. C." (will appear). "S." (ditto). "O. G." (letter shall appear). "H." "Mr. C." "W. M. C."

"Books and Addresses."—We have not time to print of books or find addresses.

**NOTICE.**—All communications respecting advertisements should be addressed to the "Publisher," and not to the Editor; all other communications should be addressed to the Editor, and not to the Publisher.

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